

### **REMARKS**

Initially, Applicants would like to thank Examiner Freeman for the time and courtesy extended to the undersigned in a telephone interview Monday, December 19. During the interview, the presently presented amendments to the independent claim were discussed. The Examiner stated that the amendments would appear to define the claims over the references cited in the Office Action, though additional consideration would be necessary upon filing of the response.

Currently, claims 2-4, 8, 10-13, 19, and 21 are pending in the application including independent claim 21. For instance, independent claim 21 is directed to a composite that includes a polyacetal component and a thermoplastic polyamide elastomer component. The polyacetal consists of polyacetal, optionally a modifier selected from the group consisting of methyl methacrylate-butadiene-styrene core-shell elastomer and methyl methacrylate-acrylate core-shell elastomer, and optionally one or more additives selected from the group consisting of glass fibers, stabilizers, nucleating agents, mold-release agents, lubricants, fillers, reinforcing materials, pigments, carbon black, light stabilizers, flame retardants, antistatic agents, plasticizers, and optical brighteners. The thermoplastic polyamide elastomer component is a multiblock copolymer consisting of polyamide segments and either polyether segments or polyester segments as described in formulae I and II or of the formulae I and III or of the formulae I, II, and III as found in independent claim 21.

In the Office Action, independent claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Flexman, et al. (U.S. Published Patent Application No. 2004/0121175) in view of ARKEMA brochure (PEBAX® Application Areas 6/2000).

Flexman, et al. is directed to layered articles including a substrate formed of a polymer system that includes a polyoxymethylene blended with a non-acetal thermoplastic polymer and a discontinuous or co-continuous layer adhered to the surface of this substrate (p. 1, ¶ [0014]). As pointed out in Flexman, et al., polyoxymethylene based substrates have low levels of adhesion at their surface, and it is difficult to make layered articles (p. 1, ¶ [0015]). Thus, Flexman, et al. describes a substrate including polyoxymethylene blended with a non-acetal thermoplastic polymer in which the non-acetal thermoplastic polymer is at or near the surface to promote adhesion of the substrate to the layer that is applied to the surface of the this blend layer. The non-acetal thermoplastic polymer is selected from those that are generally used by themselves and are known to those skilled in the art as extrusion and injection molding grade resins, as opposed to those resins that are known as minor components, i.e., processing aids, impact modifiers, and stabilizers (p. 2, ¶ [0030]).

Flexman, et al. obtains the non-acetal region on or near the surface of the substrate because in a flowing mixture of immiscible fluids, the lowest viscosity liquid will tend to migrate to the region of the highest shear, which, in the case of injection molding, is the wall of the mold cavity (p. 2, ¶ [0031]). Thus, Flexman, et al. describes a heterogeneous substrate in which the non-acetal polymer is primarily at the surface and the polyacetal is primarily deep within the substrate.

In contrast, the polyacetal component of the claimed composites consists of polyacetal and, in those embodiments in which the polyacetal component includes a modifier, the modifier is either a methyle methacrylate-butadiene-styrene core-shell elastomer or a methyl methacrylate core-shell elastomer. The polyacetal component of

the claimed composite can also include one or more additives such as those mentioned by Flexman, et al. as materials that are not considered equivalent to the non-acetal thermoplastic polymer of the Flexman, et al. polyacetal blend, i.e., additives that are not generally used by themselves and are not known to those skilled in the art as extrusion and injection molding grade resins.

Accordingly, Applicants respectfully submit that the polyacetal component of the claimed composites differs from the polyoxymethylene component of Flexman, et al. at least in that it does not include the non-acetal thermoplastic polymer of Flexman, et al. Moreover, Applicants further submit that the non-acetal thermoplastic polymer of Flexman, et al. is required in the blend of Flexman, et al. and as such, there would be no rationale for attempting to modify the polyoxymethylene component of Flexman, et al. and remove the non-acetal thermoplastic polymer from the blend.

Applicants additionally submit that even if one of skill in the art were to combine Flexman, et al. with the teachings of the ARKEMA product brochure (though Applicants in no way admit proper rationale for such a combination exists), the combined references would still fail to disclose or suggest a composite that includes a polyacetal component as is found in independent claim 21.

For at least this reason, Applicants respectfully request withdrawal of the rejection and allowance of the claims.


It is believed that the present application is in complete condition for allowance and favorable action, therefore, is respectfully requested. The Examiner is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this Amendment.

Appl. No. 10/584,745  
Amdt. dated Dec. 21, 2011  
Reply to Office Action of Sept. 26, 2011

Please charge any fees required by this Amendment to Deposit Account No. 04-1403.

Respectfully submitted,

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